

WHAT IS CLAIMED IS:

1 1. A filter device for filtering a fluid flow, the filter device having a filter
2 chamber having an inlet port for connection to a source of fluid to be filtered and an outlet
3 port for delivery of fluid filtered by the device, the chamber housing first, second and third
4 filter elements each for trapping particulate material while allowing passage of fluid between
5 first and second opposite sides, wherein the second sides of each of the first and second filter
6 elements are connected to an intermediate passage, the second side of the third filter element
7 and the intermediate passage are connected to the outlet port, the filter device has two
8 alternately selectable configurations, and in a first of the configurations the first side of the
9 first filter element is connected to the inlet port and the first side of the second filter element
10 is connected to the first side of the third filter element, and in a second of the configurations
11 the first side of the second filter element is connected to the inlet port and the first side of the
12 first filter element is connected to the first side of the third filter element.

1 2. A filter device as claimed in claim 1, wherein when the device is in the
2 first configuration fluid from a source connected to the inlet port flows from the inlet port to
3 the first side of the first filter element , through the first filter element to the second side of
4 the first filter element, to the intermediate passage, to split into first and second parallel
5 partial flows, to flow from the intermediate passage via the first partial flow to the outlet port
6 and via the second partial flow to the second side of the second filter element, through the
7 second filter element to the first side of the second filter element, to the first side of the third
8 filter element, through the third filter element to the second side of the third filter element,
9 and to the outlet port, and when the device is in the second configuration fluid from a source
10 connected to the inlet port flows from the inlet port to the first side of the second filter
11 element, through the second filter element to the second side of the second filter element, to
12 the intermediate passage, to split into third and fourth parallel partial flows, to flow from the
13 intermediate passage via the third partial flow to the outlet port and via the fourth partial flow
14 to the second side of the first filter element, through the first filter element to the first side of
15 the first filter element, to the first side of the third filter element, through the third filter
16 element to the second side of the third filter element, and to the outlet port.

1 3. A. filter device as claimed in claim 2, wherein the intermediate passage
2 includes a fourth filter element, and the partial flows pass through the fourth filter element.

1 4. A filter device as claimed in claim 3, wherein the fourth filter element
2 includes a porous media for filtering fluid flowing through the fourth filter element.

1 5. A filter device as claimed in claim 3, wherein the fourth filter element
2 has a substantially annular flow passage through which the second and fourth partial flows of
3 fluid move.

1 6. A filter device as claimed in claim 4, wherein the fourth filter element
2 includes a porous media for filtering fluid flowing through the fourth filter element.

1 7. A filter device as claimed in claim 1, wherein the filter device includes
2 an outlet filter element for treating fluid received from the intermediate passage and the
3 second side of the third filter element prior to being delivered at the outlet port.

1 8. A filter device as claimed in claim 7, wherein the outlet filter is a
2 basket containing activated carbon and/or a chemical resin.

1 9. A filter device as claimed in claim 1, wherein the first filter element
2 has a first port and a second port by which the first side of the first filter element is
3 respectively connectable to the inlet port and to the first side of the third filter element, and
4 the second filter element has third port and a fourth port by which the first side of the second
5 filter element is respectively connectable to the inlet port and to the first side of the third filter
6 element; the first and fourth ports being mutually opened and closed, and the second and third
7 ports being mutually opened and closed synchronously but oppositely to the first and fourth
8 ports, the first and fourth ports being open and the second and third ports being closed when
9 the filter device is in the first configuration, and the first and fourth ports being closed and the
10 second and third ports being opened when the filter device is in the second configuration.

1 10. A filter device as claimed in claim 9, further including a first disc
2 having a first aperture and a second disc having a second aperture, each of the first and
3 second discs being attached to a common shaft by which the first and second discs can be
4 simultaneously rotated to selectively and alternately align the first aperture with the first and
5 third ports, and the second aperture with the second and fourth ports

1 11. A filter device as claimed in claim 1, wherein the filter chamber has a
2 closeable opening through which the third filter element may be removed and replaced.